

1. In a receiving computer system that is network connectable to an IEEE 1394 network, a method for waking a link layer at the receiving computer system, the method comprising:

an act of a physical layer receiving a network packet from a sending computer system, the sending computer system being network connectable to the IEEE 1394 network;

an act of the physical layer parsing a plurality of bytes of packet data contained in the received network packet;

an act of comparing at least a portion of the packet data to rule data in a physical layer rule register; and

an act of determining if the physical layer is to assert a link on signal based on the results of the comparison, the Link On signal being a signal that, when received at the link layer, wakes the corresponding link layer.

2. The method as recited in claim 1, wherein the act of a physical layer receiving a network packet comprises an act of the physically layer receiving a primary packet.

3. The method as recited in claim 1, wherein the act of a physical layer receiving a network packet comprises an act of the physically layer receiving a PHY layer packet.

4. The method as recited in claim 1, wherein the act of the physical layer parsing a plurality of bytes of packet data contained in the received network packet

comprises an act of the physical layer parsing a plurality of bytes of packet data contained in a received primary packet.

5. The method as recited in claim 1, wherein the act of the physical layer parsing a plurality of bytes of packet data contained in the received network packet comprises an act of the physical layer parsing a plurality of bytes of packet data contained in a received PHY layer packet.

6. The method as recited in claim 1, wherein the act of the physical layer parsing a plurality of bytes of packet data contained in the received network packet comprises an act of the physical layer parsing a transaction code contained in the received network packet.

7. The method as recited in claim 1, wherein the act of the physical layer parsing a plurality of bytes of packet data contained in the received network packet comprises an act of the physical layer parsing an address offset contained in the received network packet.

8. The method as recited in claim 1, further comprising:
an act of utilizing a configuration interface to configure the physical layer rule register.

9. The method as recited in claim 8, wherein the act of utilizing a configuration interface to configure the physical layer rules register comprises an act of utilizing an Open Host Controller Interface.

10. The method as recited in claim 1, wherein the act of comparing at least a portion of the packet data to rule data in a physical layer rule register comprises an act of applying a bit mask to a parsed plurality of bytes of packet data.

11. The method as recited in claim 10, wherein the act of applying a bit mask to a parsed plurality of bytes of packet data comprises an act of applying a bit mask stored in a physical layer mask register.

12. The method as recited in claim 11, further comprising:
an act of an act of utilizing a configuration interface to configure the physical layer mask register.

13. The method as recited in claim 12, wherein the act of utilizing a configuration interface to configure the physical layer mask register comprises an act of utilizing an Open Host Controller Interface.

14. The method as recited in claim 1, wherein the act of comparing at least a portion of the packet data to rule data in a physical layer rule register comprises an act of comparing a transaction code to rule data.

15. The method as recited in claim 1, wherein the act of comparing at least a portion of the packet data to rule data in a physical layer rule register comprises an act of comparing an address offset to rule data.

16. The method as recited in claim 1, wherein the act of determining if the physical layer is to assert a link on signal based on the results of the comparison comprises an act of determining that the physical layer is to assert a Link On signal.

17. The method as recited in claim 16, wherein the act of determining that the physical layer is to assert a Link On signal comprises an act of determining that the at least a portion of the packet data matches the rule data.

18. The method as recited in claim 16, further comprising:
an act of asserting a Link On signal.

19. The method as recited in claim 1, wherein the act of determining if the physical layer is to assert a Link On signal based on the results of the comparison comprises an act of determining that the physical layer is not to assert a Link On signal.

20. The method as recited in claim 19, wherein the act of determining that the physical layer is not to assert a Link On signal comprises an act of determining that the at least a portion of the packet data does not match the rule data.

21. The method as recited in claim 1, wherein the receiving computer system comprises a consumer electronics device.

22. The method as recited in claim 1, wherein the receiving computer system comprises an electronic logic state machine.

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23. At a receiving computer system that is network connectable to an IEEE 1394 network, a method for waking a link layer at the receiving computer system, the method comprising:

a step for a physical layer identifying packet data contained in a network packet;

an act of comparing at least a portion of the packet data to rule data in a physical layer rule register; and

an act of determining if the physical layer is to assert a link on signal based on the results of the comparison, the link on signal being a signal that, when received at the link layer, wakes the link layer.

24. A computer program product for use in a receiving computer system that is network connectable to an IEEE 1394 network, the computer program product for implementing a method for waking a link layer at the receiving computer system, the computer program product comprising one or more computer-readable media having stored thereon computer executable instructions that, when executed by a processor, cause a physical layer at the receiving computer system to perform the following:

receive a network packet from a sending computer system, the sending computer system being network connectable to the IEEE 1394 network;

parse a plurality of bytes of packet data contained in the received network packet;

compare at least a portion of the packet data to rule data in a physical layer rule register; and

determine if the physical layer is to assert a link on signal based on the results of the comparison, the Link On signal being a signal that, when received at the link layer, wakes the corresponding link layer.

25. The computer program product as recited in claim 24, wherein computer-executable instructions that, when executed, cause a physical layer at the receiving computer system to parse a plurality of bytes of packet data contained in the received network packet comprise computer-executable instructions that, when executed, cause a physical layer at the receiving computer system to parse a plurality of bytes of packet data contained in a primary packet.

26. The computer program product as recited in claim 24, further comprising:
computer-executable instructions that, when executed, cause a physical layer
at the receiving computer system to assert a Link On signal.

27. The computer program product as recited in claim 24, wherein the one or
more computer-readable media comprise physical storage media.

28. The computer program product as recited in claim 24, wherein the one or
more computer-readable media comprise system memory.

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